

We claim:

1. A method for producing carbon black pellets, comprising feeding an amount of unpelletized carbon black as a feed amount into an inlet of a ring layer mixing granulator, keeping the feed amount of unpelletized carbon black constant and dispersing water into said granulator via two nozzle holders positioned as close as possible to the inlet, each with two nozzles, where spray cones from the nozzles make an angle between 10 and 90° to the direction of flow of the carbon black, at a pressure of 3-5 bar measured at the nozzles.

2. Carbon black pellets with an oil absorption number greater than 100 ml/100 g and an oil absorption number of the pressed carbon black greater than 78 ml/100 g, which are characterized by the fact that the pellet fraction with a diameter greater than 2.5 mm is less than 3.5 wt%, the pellet fraction with a diameter of 0.71-1.0 mm is greater than 22 wt%, and the individual pellet hardness of the fraction with the 0.71-1.0 mm diameter is between 7.0 and 25.0 g.

3. Carbon black pellets according to Claim 2 which have a BET surface area of less than 70 m²/g.

4. Carbon black pellets according to Claim 2 which in an undried state have a moisture content of 35 to 60 wt%.

5. Carbon black pellets with an oil absorption number less than 90 ml/100 g, and an oil absorption number of the pressed carbon black less than 78 ml/100 g, which are characterized by the fact that the pellet fraction with a diameter of 0.71-1.0 mm is less than 30 wt% and the individual pellet hardness of the fraction with the 0.71-1.0 mm diameter is between 7.0 and 25.0 g.

6. Carbon black pellets according to Claim 5 which have a BET surface area of less than 70 m²/g.

7. Carbon black pellets according to Claim 5 which in an undried state have a moisture content of 35 to 60 wt%.

8. A composition of matter comprising the carbon black pellets of Claim 2 and a polymer, paint, dye or pigment.

9. A composition of matter comprising the carbon black pellets of Claim 5 and a polymer, paint, dye or pigment.

10. A rubber composition comprising the carbon black pellets of Claim 2 and a natural or synthetic rubber.

11. A rubber composition comprising the carbon black pellets of Claim 5 and a natural or synthetic rubber.

12. A method of forming an unvulcanized rubber composition comprising:
mixing together the carbon black of Claim 2 with a sufficient amount of a natural or synthetic rubber in a thermomechanical mixing step at a temperature of 100 to 170°C.

13. The method according to Claim 12, further comprising subsequently adding crosslinking agents and mixing in an internal mixer or roll at 40 to 100°C.

14. The method according to Claim 13, further comprising subsequently vulcanizing said rubber composition at 80 to 220°C, optionally under a pressure of 10-200 bar.

15. A method of forming an unvulcanized rubber composition comprising:
mixing together the carbon black of Claim 5 with a sufficient amount of a natural or synthetic rubber in a thermomechanical mixing step at a temperature of 100 to 170°C.

16. The method according to Claim 15, further comprising subsequently adding crosslinking agents and mixing in an internal mixture or role at 40 to 100°C.

17. The method according to Claim 16, further comprising subsequently vulcanizing said rubber composition at 80 to 220°C, optionally under a pressure of 10-200 bar.

18. A vulcanized rubber article made from the rubber composition of Claim 10.

19. A vulcanized rubber article made from the rubber composition of Claim 11.

20. The vulcanized rubber article of Claim 18 which is a tire, tire tread, cable jacket, hose, drive belt, conveyor belt, roll coating, shoe sole or sealing ring.

21. The vulcanized rubber article of Claim 19 which is a tire, tire tread, cable jacket, hose, drive belt, conveyor belt, roll coating, shoe sole or sealing ring.